



Montana Fish, Wildlife & Parks

Region One
490 North Meridian Road
Kalispell, MT 59901
(406) 752-5501
FAX: (406) 257-0349
Ref: JS081-05
December 22, 2005

Ladies and Gentlemen:

Fish, Wildlife & Parks, Region One, has completed an environmental assessment for the purpose of introducing tiger muskies into Horseshoe Lake in the Thompson Chain of Lakes (TCL) in Lincoln County, Montana, to increase sportfishing opportunities. The tiger muskies are a sterile hybrid of northern pike and muskellunge that would be obtained from the Miles City State Fish Hatchery, which obtains eggs from Wisconsin.

As noted in *Fisheries Beyond 2000, Strategic Plan 1999-2010*, "the mission of the Fisheries Program is to preserve, maintain, and enhance all aquatic species and their ecosystems to meet the public's demand for recreational opportunities and stewardship of aquatic wildlife." The two goals of providing recreational fishing and conserving native fish can be difficult to balance, but they are not mutually exclusive. A blend of native and nonnative fish management is found within both the TCL and across northwest Montana. Tiger muskies have several attributes that make them useful for sport fish management in Horseshoe Lake.

Tiger muskies are attractive to anglers because they reach a relatively large size, thus providing a unique trophy fishery. Tiger muskies are also a useful sport fish because they can be used to reduce densities of associated populations of prey. Another attraction of tiger muskies as a sport fish is their inability to reproduce. The preponderance of information in the literature and management experience across the United States suggests tiger muskies are functionally sterile.

Since tiger muskies are incapable of reproducing, their numbers can be carefully managed and controlled in a water body. This EA details proposed stocking and monitoring of tiger muskies in Horseshoe Lake, which will ensure appropriate densities needed to control largescale sucker and northern pikeminnow populations that presently dominate the fish community while providing little or no angling opportunities. Once these populations have been reduced, stocking and management of salmonids may be feasible.

After review of the draft EA and public comments, it is recommended that the proposed project be implemented. There were no changes to the draft EA; therefore, the draft becomes the final EA. A copy of the decision notice, which includes response to those comments that were not substantively covered in the draft EA, is enclosed for your information.

Please direct questions or comments to Fisheries Manager Jim Vashro, FWP, 490 North Meridian Road, Kalispell, MT 59901, or e-mail to jvashro@mt.gov.

Sincerely,

James R. Satterfield, Jr., Ph.D.
Regional Supervisor

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Enclosure

c: *Governor's Office, Attn: Mike Volesky, PO Box 200801, Helena, 59620-0801
 Environmental Quality Council, PO Box 201704, Helena, MT 59620-1704
 *Dept. of Environmental Quality, Planning, Prevention & Assistance, PO Box 200901, Helena, 59620
 *Dept. of Environmental Quality, Permitting Compliance, PO Box 200901, Helena, 59620-0901
 Montana Fish, Wildlife and Parks: Director's Office - Reg Peterson; Fisheries Division - Karen
 Zackheim; Legal Unit - Brandi Fisher; Endangered Species Coordinator - Arnold Dood; Nongame
 Coordinator - Heidi Youmans; Native Species Coordinator, Fisheries - Robert Snyder; Kalispell FWP.
 *Montana Historical Society, State Historic Preservation Office, PO Box 201202, Helena, 59620
 *Montana State Library, 1515 East Sixth Ave., Helena, 59620-1800
 DNRC, PO Box 201601, Helena, 59620-1601
 *DNRC, Bob Sandman
 Jim Jensen, Montana Environmental Information Center, PO Box 1184, Helena, 59624
 George Ochenski, PO Box 689, Helena, 59624
 Wayne Hirst, Montana State Parks Foundation, PO Box 728, Libby, 59923
 Montana State Parks Association, PO Box 699, Billings, 59103
 Joe Gutkoski, President, Montana River Action Network, 304 N 18th Ave., Bozeman, 59715
 Commissioner Vic Workman, Box 1726, Whitefish, MT 59937
 Sen. Aubyn Curtiss, PO Box 216, Fortine, 59918-0216
 Rep. Rick Maedje, PO Box 447, Fortine, 59918-0447
 Tribal Historic Preservation Office, CSKT, PO Box 278 Pablo, 59855
 Lincoln County Commissioners, 512 California Avenue, Libby, 59923
 Interested Parties



Montana Fish, Wildlife & Parks

Decision Notice and Finding of No Significant Impact for Tiger Muskie Introduction Horseshoe Lake, Lincoln County, Montana Environmental Assessment

Montana Fish, Wildlife & Parks
Region One Fisheries
490 North Meridian Road
Kalispell, MT 59901

December 22, 2005

Project Proposal

Montana Fish, Wildlife & Parks proposes to introduce tiger muskellunge (*Esox masquinongy* x *Esox lucius*) into Horseshoe Lake, Lincoln County, Montana. Tiger muskellunge are a sterile hybrid of northern pike and muskellunge. The primary goal of this introduction is to provide sportfishing opportunities in a lake that presently offers very little recreation to anglers. A secondary goal is the future development of rainbow trout and kokanee populations in the event tiger muskies reduce largescale sucker and northern pikeminnow populations, which presently dominate the fish community.

Public Involvement

This proposal was first identified in the Thompson Chain of Lakes Fisheries Management Plan adopted by the FWP Commission in 1997 after extensive public involvement. The proposal was reaffirmed in the Montana Statewide Warmwater Fish Management Plan also adopted in 1997.

An environmental assessment was subsequently drafted and released for 30 days of public comment in September 2000. A total of 167 comments were received, with 102 comments in favor of the proposal. However, substantive issues were raised, so action was deferred pending more research. An updated environmental assessment was released August 9, 2005, for 30 days of public comment. A public meeting was held at the Fisher River Fire Hall on August 29, 2005. The EA was advertised through media releases and legal notices. Copies of the EA were available from the Kalispell FWP office, on the FWP web site, and at the Montana State Library and Lincoln County Libraries in Libby, Eureka, and Troy. The EA was mailed directly to a number of interested persons.

Eight people attended the open house. In total, there were 88 comments in favor of the proposal, including e-mails, phone calls, letters, and EA comment forms. There were 25 comments opposed to the proposal, including letters, e-mails, and variations of a form letter. There were two petitions with 319 signatures opposed to the proposal. There were 4 comments neutral on the proposal that raised related issues.

Response to Comments

Issues that were substantively covered in the EA will not be addressed here. The following issues need additional clarification or discussion:

1. Potential illegal transplants of tiger muskies to nearby Loon Lake in the Pleasant Valley Fisher Drainage will interfere with attempts to recover native redband and bull trout.
Unfortunately, illegally transplanted northern pike were documented in Loon Lake in 2002, and they are now well established. It is doubtful that illegal transplants of tiger muskies, if they occurred, would have any impact beyond what is occurring. The illegal plant of pike cannot be condoned and may impact trout in the lake, but pike have not shown any tendency to move into the swifter-flowing portions of the drainage that trout inhabit.
2. The introduction of tiger muskies will provide another species for illegal transplants with impacts on native trout.
Illegal transplants of a variety of fish species, including suckers, minnows, and warmwater fish species, have impacted trout populations across Montana. This occurs when an illegal species reproduces to become abundant and there is substantial habitat overlap with existing fisheries. Tiger muskies are functionally sterile and densities will be low enough to not provide many fish for possible transplants. Tiger muskies will not be protected outside of Horseshoe Lake. If unexpected impacts occur, tiger muskie plants would be halted and the fish would fade away.
3. The introduction of a nonnative warmwater species is inconsistent with FWP's goal to recover native fish.
As noted in *Fisheries Beyond 2000, Strategic Plan 1999-2010*, "the mission of the Fisheries Program is to preserve, maintain, and enhance all aquatic species and their ecosystems to meet the public's demand for recreational opportunities and stewardship of aquatic wildlife."

The two goals of providing recreational fishing and conserving native fish can be difficult to balance, but they are not mutually exclusive. FWP Region 1 Fisheries has had a native species conservation and restoration program for over 50 years. As a result, northwest Montana has some of the healthiest populations of westslope cutthroat and bull trout in the western United States. Tiger muskies have several attributes that make them useful for sport fish management in Horseshoe Lake. Tiger muskies are attractive to anglers because they reach a relatively large size, thus providing a unique trophy fishery. Tiger muskies are also a useful sport fish because they can be used to reduce densities of associated populations of prey. Another attraction of tiger muskies as a sport fish is their inability to reproduce. The preponderance of information in the literature and management experience across the United States suggests tiger muskies are functionally sterile.

4. The low numbers of tiger muskies will not provide much recreation relative to their cost.
Tiger muskies would be managed with a limit of 1 fish per day, 40" minimum length. This limit recognizes the low density of the fish and aims to maximize the biological control of nongame fish by each tiger muskie before it is harvested. The introduction is intended to provide an opportunity to fish for, and catch and release, undersized fish. Each tiger muskie would likely be caught and released several times before it is large enough to harvest as a trophy. If tiger muskies are successful in reducing the nongame fish, this would allow for management for trout and salmon for additional recreation.
5. Potential impacts to boreal toads cannot be properly estimated since the 2000 survey by Hendricks did not include Horseshoe Lake.
As noted in the EA, Kristian Skybak, who has training in amphibian surveys, surveyed Horseshoe Lake in 2002. Skybak found spotted frogs, but no boreal toads.
6. This proposal does not address the threat to loons.
Loons have not nested in Horseshoe Lake since the 1980s. It is not known if they will reestablish nesting without altering existing uses. A nesting platform has been placed and, if loons try to nest, the area will be buoyed and patrolled by a loon ranger. This strategy has been successful elsewhere in the TCL over a variety of recreational uses and fisheries in mitigating impacts to loons.
7. The presence of suckers and northern pikeminnows (squawfish) is why the lake is so clear. If you reduce those species, the lake will get muddy.
Fishery managers in Regions 5 and 6 were queried as to water clarity changes with introduction of tiger muskies in their areas. No adverse changes were noted despite substantial changes in the fish communities. Suckers are generally regarded as a cause for muddy water, both through physical disturbance of the bottom and by recycling nutrients from the bottom back into the water column. Lebo Lake in Region 5 showed a substantial improvement in water clarity after nongame fish numbers were reduced.
8. FWP should not change the historical use of the lake.
Boating and swimming have dominated recreational uses in recent years. However, Horseshoe Lake has a history of fish plants back to 1924 for a variety of fish species, so there is also a history of fishing. The statewide mail creel survey estimates 100-200 days of fishing each year. This proposal will not add a new use, but it does have potential to change the relative amount of uses to something resembling the other lakes in TCL.
9. There should be a detailed implementation and monitoring plan.
Initial stockings of tiger muskies will consist of about 500 7" fish stocked in late summer-early fall at night for 2 or 3 years. After tiger muskies are established, stocking will be reduced to about 150 7" fish in mid-September every other year. Stocking rates will be modified based on monitoring results.

The Horseshoe Lake fishery is monitored each year by setting 3 sinking gillnets in standard locations overnight. The gillnets are 6' x 125' with varying mesh sizes. Gillnet catches provide information on relative abundance, age, and growth of each

species. Stocking rates could be adaptively changed dependent on monitoring information. Fishing use would be estimated by the statewide mail creel survey.

10. How much will this proposal cost compared to an estimate of \$100,000 for chemical treatment?

Stocking of tiger muskies from the Miles City Hatchery would cost approximately \$1,000 for fish rearing, travel, and per diem costs. Monitoring would require 4 man-days and travel, for an estimated cost of \$540. This is an ongoing cost and is mitigated by combining sampling of several other lakes in one trip. The costs of fishing access maintenance, enforcement patrols, and loon ranger patrols are ongoing and would increase only slightly for more site visits to Horseshoe Lake.

11. Trout and salmon anglers should not be restricted if tiger muskie anglers are not restricted.

The development of salmonid populations is a secondary goal of this proposal and entirely dependent on the ability of tiger muskies to reduce numerous nongame fish populations. It will probably require at least 4-5 years before reintroduction of rainbow trout and/or kokanee is feasible. Implementation of any summertime closures or other significant regulations would be preceded by public involvement.

12. Anglers should not be restricted in any way for other recreational users if Land and Water Conservation Funds, Dingell-Johnson, Wallop-Breaux, or state fishing license dollars were used to acquire, develop, and maintain Horseshoe Lake.

Fishing closures are not contemplated at this time. If unmanageable conflicts arise in the future between recreational boaters and anglers, fishing closure proposals would go through the annual fishing regulation process with the FWP Commission. Public comment would be invited through that process.

Based on public comment, I have determined there are no substantive deficiencies in the draft environmental assessment on the proposal to introduce tiger muskellunge into Horseshoe Lake in Lincoln County, Montana. The proposal appears to be a biologically sound, cost-effective means of producing new angling opportunities in Horseshoe Lake and reducing nongame fish populations, with no irreversible impacts. Therefore, I recommend the proposed project be implemented. The draft EA therefore becomes the final EA by reference in this decision notice and is effective on this date.

James R. Satterfield, Jr., Ph.D.
Regional Supervisor

Date